

Customer No.: 31561
Application No.: 10/604,271
Docket No.: 10109-US-PA

AMENDMENTS TO CLAIMS

Please amend claims as follows.

1. (currently amended) A photomask with an internal assistant pattern, comprising:

at least a first pattern comprising a plurality of parallel lines along a first direction;

at least a second pattern comprising a plurality of parallel lines along a second direction that is different from the first direction; and

an internal assistant pattern comprising a shaped structure formed in said first pattern, wherein said second direction is perpendicular to a common line of two light exit apertures used for exposing the photomask.

2. (currently amended) The photomask of claim 1, wherein the shape of the shaped structure of the internal assistant pattern is one selected from a group consisting, consisting of: a square, a rectangle, and a circle.

3. (currently amended) A light projection system for exposing a photomask with an internal assistant pattern, comprising:

an opaque panel comprising two light exit apertures positioned along a common line, for exposing the photomask, wherein the two light exit apertures are positioned along a common line;

the photomask comprises:

a first pattern comprising a plurality of parallel lines along a first direction;

a second pattern comprising a plurality of parallel lines along a second direction,

Customer No.: 31561
Application No.: 10/604,271
Docket No.: 10109-US-PA

wherein the second direction is different from the first direction, wherein at least parallel lines of said first or second pattern are ~~is~~ positioned parallel to said common line; and

an internal assistant pattern comprising a shaped structure formed in one of said ~~first~~ ~~first~~ or second patterns positioned parallel to said common line, so that said first and second patterns are transferred to a surface of a photoresist layer by a single exposure step.

4. (currently amended) The photomask of claim 3, wherein the internal assistant pattern is formed in the second ~~first~~ pattern when the parallel lines of the first ~~second~~ pattern are positioned along a vertical direction that is perpendicular with respect to the common line of two light exit apertures.

5. (currently amended) The light projection system ~~photomask~~ of claim 3, wherein the internal assistant pattern is formed in the first ~~second~~ pattern when the parallel lines of the second ~~first~~ pattern are ~~is~~ positioned along a vertical direction that is perpendicular with respect to the common line of two light exit apertures.

6. (currently amended) The light projection system ~~photomask~~ of claim 3, wherein the shape of the shaped structure of the internal assistant pattern is one selected from a group ~~consisting~~, consisting of: a square, a rectangle, and a circle.

7. (currently amended) A light projection system ~~photomask with an internal assistant pattern~~, comprising:

an opaque panel comprising two light exit apertures, for exposing the a photomask, wherein the two light exit apertures are positioned along a common line;

Customer No.: 31561
Application No.: 10/604,271
Docket No.: 10109-US-PA

wherein

the photomask comprises:

a horizontal pattern comprising a plurality of parallel lines;

a vertical pattern comprising a plurality of parallel lines; and

an internal assistant pattern comprising a shaped structure in at least one of said horizontal or vertical patterns, so that said horizontal and vertical patterns are transferred to a surface of a photoresist layer by a single exposure step.

8. (currently amended) The light projection system photomask of claim 7, wherein the internal assistant pattern is formed in the horizontal pattern when the parallel lines of the vertical pattern are positioned along a vertical direction that is perpendicular with respect to the common line of two light exit apertures.

9. (currently amended) The light projection system photomask of claim 7, wherein the internal assistant pattern is formed in the vertical pattern when the parallel lines of the horizontal pattern are positioned along a vertical direction that is perpendicular with respect to the common line of two light exit apertures.

10. (currently amended) The light projection system photomask of claim 7, wherein the shape of the shaped structure of the internal assistant pattern is one selected from a group ~~consisting~~, consisting of: a square, a rectangle, and a circle.